

**10/588820**

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DESCRIPTION BASED ON ARTICLE 19(1) OF THE CONVENTION

1. Claims 1-12 remain unchanged.

2. Claims 13-22 as originally filed have been replaced  
by amended claims 13-25.

terminal; and

iv. reactivating the signaling state and re-allocating corresponding network resources by the said network elements capable of processing the said restore  
5 message.

13. (Amended) The method for the resource management signaling in a data communication network according to claim 12 further comprising the steps of:

10 i. including a timer value with the said resource release message sent to old data path by the said crossover router; and

ii. deleting the signaling state in the dormant mode when the timer expires by the said network elements  
15 along the old data path.

14. (Amended) The method for the resource management signaling in a data communication network according to claim 13 further comprising the step of informing the  
20 preferred timer value through a message for setting up signaling state for the new data path by the said mobile terminal.

15. (Amended) The method for the mobile terminal to  
25 decide the timer value according to claim 13 by using

information comprising:

- i. the network interface type;
- ii. last detected signaling strength;
- iii. attachment point coverage area;
- 5 iv. the access point load situation;
- v. cost of the link; and
- vi. weighted sum of the above factors

16. (Amended) A method for the resource management  
10 signaling in a data communication network to achieve  
fast signaling state re-establishment comprising the  
steps of:

- i. detecting the change of data route, and  
sending messages for releasing network resources along  
15 the previous data path for the communication session by  
a crossover node along the communication data path of a  
mobile terminal;

- ii. setting the signaling state for the  
communication session to dormant mode and releasing  
20 corresponding network resources by the network elements  
capable of processing the said release message along the  
previous data path;

- iii. detecting the said mobile terminal's return to  
the old data path and sending messages for restoring the  
25 signaling state and network resources to the old data

path by the said crossover node; and

iv. reactivating the signaling state and re-allocating corresponding network resources by the said network elements capable of processing the said restore message.

17. (Amended) The method for the resource management signaling in a data communication network according to claim 16 further comprising the steps of:

10 i. including a timer value with the said resource release message sent to old data path by the said crossover router; and

ii. deleting the signaling state in the dormant mode when the timer expires by the said network elements along the old data path.

18. (Amended) The method for the resource management signaling in a data communication network according to claim 17 further comprising the step of informing the preferred timer value through a message for setting up signaling state for the new data path by the said mobile terminal.

19. (Amended) The method for the mobile terminal to detect the return to the old data path according to

claim 12 comprising the steps of:

i. storing previously used address and attachment point information in a local database with a timer associated by the mobile terminal;

5 ii. searching the data base when attached to a new attachment point and been allocated a new address by the mobile terminal; and

10 iii. removing the address and attachment point information from the database when the associated timer expired by the mobile terminal.

20. (Amended) The method for the crossover node to detect the mobile terminal's return to the old data path according to claim 16 comprising the steps of:

15 i. storing the mobile terminal's previously used path information in a local database with a timer associated when a data route change is detected by the crossover node;

20 ii. searching the data base when detected an data route change by the crossover node; and

iii. removing the path information from the database when the associated timer expires by the crossover node.

25 21. (Amended) The method for the mobile terminal to

decide the timer value according to claim 17 by using information comprising:

- i. the network interface type;
- ii. last detected signaling strength;
- 5 iii. attachment point coverage area;
- iv. the access point load situation;
- v. cost of the link; and
- vi. weighted sum of the above factors

10 22. (Amended) The method for the mobile terminal to decide the timer value according to claim 19 by using information comprising:

- i. the network interface type;
- ii. last detected signaling strength;
- 15 iii. attachment point coverage area;
- iv. the access point load situation;
- v. cost of the link; and
- vi. weighted sum of the above factors

20 23. (Amended) A method for the resource management signaling in a data communication network to achieve fast signaling state re-establishment when a local mobile anchor point is used to conceal the movement of the mobile terminal to external nodes comprising the

25 steps of:

i. informing the mobility anchor point of change of location, and the mobility anchor point sending messages for releasing network resources along the previous data path for the communication session by the mobile terminal;

ii. setting the signaling state for the communication session to dormant mode and releasing corresponding network resources by the network elements capable of processing the said release message along the previous data path;

iii. detecting the said mobile terminal's return to the location and sending messages for restoring the signaling state and network resources to the old data path by the said mobility anchor point; and

iv. reactivating the signaling state and re-allocating corresponding network resources by the said network elements capable of processing the said restore message.

24. (Amended) A method for the resource management signaling in a data communication network to achieve fast recovery from transient route changes comprising the steps of:

i. detecting the change of data route and send message for releasing the network resources along the

old data path by the crossover nodes along the data path;

ii. starting a timer and monitoring the status of the old path and sending message for restoring the signaling state and network resources when detected the old path is available by the said crossover nodes; and

iii. informing the routing management entity of the availability of the old data path by the said crossover nodes.

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25. (Amended) The method for the said crossover node to monitor the availability of the old path according to claim 24 comprising the steps of:

i. periodically sending probe messages along the old data path by the crossover nodes; and

ii. dictating the availability of the old path when received the probe message along the old data path by the crossover nodes.